

Notice of Allowability

Application No.

09/511,777

Examiner

David E. England

Applicant(s)

ALLEN ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/18/2006.
2. ☒ The allowed claim(s) is/are 1, 2, 4 and 6-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



JEFFREY PWU
COPY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

1. (previously presented) A method for representing a plurality of addresses in an address table in a communication system, the method comprising the steps of:

selecting at least one regular expression character having a predetermined meaning which represents commonality between at least one character of each address in the plurality of addresses, wherein the regular expression character is chosen in accordance with a regular expression syntax capable of representing commonality within contiguous address ranges and non-contiguous address ranges;

generating a single address that represents the plurality of addresses by inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, thereby generating a group address; and

storing the generated group address in the address table, whereby a plurality of addresses are represented by a single group address entry in the address table.

2. (previously presented) The method of claim 1, wherein the plurality of addresses comprises at least one X. 121 address.

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3. (cancelled)

4. (previously presented) The method of claim 1, wherein the plurality of addresses comprises at least one MAC address.

5. (cancelled)

6. (currently amended) The method of claim [[3]] 1, further comprising the step of using the regular expression to specify at least one address of an address pool.

7. (previously presented) The method of claim 1, wherein said storing step includes the further step of storing the generated group address in a management information base.

8. (previously presented) A network device operative to communicate with a plurality of other network devices, each having at least one address, comprising:

circuitry operative to select at least one regular expression character having a predetermined meaning which represents commonality between at least one character of each address, wherein the regular expression character is chosen in accordance with a regular expression syntax capable of representing commonality within contiguous address ranges and non-contiguous address ranges,

the circuitry further operative to generate a single address that represents the addresses by inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, thereby generating a group address; and

a storage for storing the generated group address, whereby a plurality of addresses are represented by a single address entry in said storage.

9. (original) The network device of claim 8, wherein the storage comprises an address configuration table.

10. (previously presented) The network device of claim 9, wherein the regular expression character defines a source address group.

11. (original) The network device of claim 8, wherein the storage comprises a management information base.

12. (previously presented) The network device of claim 11, wherein the regular expression character defines an address pool.

13. (original) The network device of claim 8, wherein the storage comprises a routing table.

14. (previously presented) The network device of claim 11, wherein the regular expression character defines a forwarding equivalence class for a routing table entry.

15. (previously presented) An address configuration table for mapping a plurality of source devices in a source network to a single destination device in a destination network, the address configuration table comprising:

at least one entry representative of a plurality of addresses, said entry having at least one regular expression character in place of characters in the plurality of addresses, said entry being generated by:

selecting at least one regular expression character having a predetermined meaning which represents commonality between at least one character in each address, wherein the regular expression character is chosen in accordance with a regular expression syntax capable of representing commonality within contiguous address ranges and non-contiguous address ranges, and

inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, and storing the generated group address in the address table.

16. (previously presented) A management information base comprising:

a management object for storing at least one entry representative of a plurality of addresses, said entry having at least one regular expression character in place of characters in the plurality of addresses, said entry being generated by:

selecting at least one regular expression character having a predetermined meaning which represents commonality between at least one character in each address, wherein the regular

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expression character is chosen in accordance with a regular expression syntax capable of representing commonality within contiguous address ranges and non-contiguous address ranges, and

inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, and storing the generated group address in the address table.

1. Claims 1, 2, 4 and 6 – 16 are allowed.

Reasons for Allowance

2. The following is an examiner's statement of reasons for allowance: the closest prior art of record (Douceur et al. U.S. Patent No. 5995971 does not teach nor suggest "selecting at least one regular expression character having a predetermined meaning which represents commonality between at least one character of each address in the plurality of addresses, wherein the regular expression character is chosen in accordance with a regular expression syntax capable of representing commonality within contiguous address ranges and non-contiguous address ranges; generating a single address that represents the plurality of addresses by inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, thereby generating a group address; and whereby a plurality of addresses are represented by a single group address entry in the address table." as argued by the Applicant (see Remarks dated 09/18/2006, pages 5 – 7; Specification as of 02/24/2000, pages 7 – 10 and 14 –

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22; and Drawings dated 02/24/2000, Figures 9, 10 and 12 – 16 of Applicant's enabling portions of the specification and drawings).

3. (Kohler U.S. Patent No. 6192396, Beck et al. U.S. Patent No. 5903723, Brown et al. U.S. Patent No. 6073137) does not teach nor suggest in detail an HTTP checker, determining whether or not said HTTP messages agree with a condition of said condition setting part of said rule definition part; an HTTP editor, editing contents of said HTTP messages according to contents of said command setting part of said rule definition part, when said HTTP messages agree with a predetermined condition, wherein the editing contents of said HTTP messages includes embedding a command in said HTTP message, and wherein said browser on an agent-side information terminal displays said HTTP message by executing the command embedded in said HTTP message; customer cache storing of said HTTP messages in an unedited form sent to the browser loaded on the customer-side information terminal; and an information terminal support server having agent cache for storing said HTTP messages in an edited form sent to the browser loaded on an agent-side information terminal." as argued by the Applicant (see Remarks dated 10/18/2006, pages 7 – 9; Specification as of 10/18/2006, pages 20 – 32; and Drawings dated 01/05/2006, Figures 2 – 4 of Applicant's enabling portions of the specification and drawings).

Neither Douceur with references including Ankney, Beser and Belser teach the use of the claimed invention. In Douceur, as stated at column 10, lines 14 through 17, "by virtue of having a wildcard(s), a single source address in a pattern, such as that in pattern 250, can match against multiple different source addresses in packets." The pending claims do not recite use of wildcards in a filter, or to identify file names in a command line interface, but rather to create group addresses that are stored in an address table. While Douceur's wildcards are in a filter that

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could be used to filter addresses from a table, the present claims recite that wildcards ("regular expression characters") are actually in addresses in the address table itself. In claim 1 this distinguishing feature is recited as "generating a single address that represents the plurality of addresses by inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, thereby generating a group address; and storing the generated group address in the address table, whereby a plurality of addresses are represented by a single group address entry in the address table." Similarly, claim 8 recites "the circuitry further operative to generate a single address that represents the addresses by inserting the selected at least one regular expression character in place of the at least one character of the plurality of addresses, thereby generating a group address; and a storage for storing the generated group address, whereby a plurality of addresses are represented by a single address entry in said storage." Claims 15 and 16 recite similar language. However, none of those secondary references were cited for, nor teaching, an address table having an entry that uses wildcards in a single address to represent multiple addresses in a network.

4. The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claim as well as for the further limitations set forth. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David E. England
Examiner
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JEFFREY PWU
PRIMARY EXAMINER